

BIO B11H3S**Syllabus for January 2016**

Date	Topic	Smart Pages	One Page Summary	Lecture #
Jan 5	Course overview/Quizzical &n ENGAGE assignments and web interface			
Jan 7	Review of heredity	Fig 10-1, 3, 7; 14-39, 41, 44, 46, HPfigure 1	OP1	<u>1</u>
Jan 7 (5PM)	Genome organization and molecular evolution	Fig 10-10, 15, 17, 19, 22, 23	OP2	<u>2</u>
Jan 7	Tutorial: 6-7PM Q&A session			
Jan 12	Genome evolution and polymorphisms	Figs 10-26, 27, 29, 30, <u>SNP figure</u> from Blackboard, HPfigure 1	OP3	<u>3</u>
Jan 14	Transcription I: Overview and rRNA synthesis/maturation	Fig 11-1, 2, 4, 6, 7, 9, 12, 13, 14	OP4	<u>4</u>
Jan 19	Transcription II: hnRNA and splicing	Figs 11-17, 18, 20, 21, 23, 24, 29	OP5	<u>5</u>
Jan 21	Transcription III: RNA Splicing	Figs 11-30, 31, 32, 34, 35, 36, 37, 38	OP6	<u>6</u>
Jan 26	Translation I: Genetic code and role of tRNA	Figs 2-24; 11-39, 40, 41, 42, 44, 46, 47, 49, 52	OP7/8	<u>7/8</u>
Jan 28	Translation II: mechanistic view			
Jan 28	Tutorial: 5-7PM Q&A session			
Jan 30	First Term Test on L1-8.			
Feb 2	Nuclear and chromatin structure	Figs 12-5, 6, 10, 11, 12, 16	OP9	<u>9</u>
Feb 4	Gene Regulation I: Promoters and control circuits	Figs 12-1, 2, 3, 33, 45, 48	OP10	<u>10</u>

Feb 9	Gene Regulation II: Transcription factors and microarray technology	Figs 12-34, 36, 37, 38, 39	OP11	<u>11</u>
Feb 11	Gene Regulation III: Epigenetics/miscellaneous regulatory mechanisms	Figs 12-18, 47,50, 51, 53, 57, 58, 59, 62, 64	OP12	<u>12</u>
Feb 23	DNA Replication I: general enzymology	Figs 13-2, 3, 4, 7, 8, 9, 10, 11	OP13	<u>13</u>
Feb 25	DNA Replication II: mechanism and regulation	Figs 13-12, 13, 14, 15, 19, 20, 22	OP14	<u>14</u>
Feb 25	Tutorial: 5-7PM Q&A session			
Mar 1	Telomere replication and DNA repair processes	Figs 12-24; 13- 16, 17, 24, 25, 26	OP15	<u>15</u>
Mar 3	Cell Cycle I: Introduction/ cyclins/CDKs	Figs 14-1, 2, 3, 4, 5, 6, 8, 11	OP16	<u>16</u>
Mar 8	Cell Cycle II: Chromosome condensation & movement	Fig 9-17; 14-14, 16, 17, 22, 25, 28, 30	OP17	17
Mar 10	Cell Cycle III: Biochemical regulation of mitosis	Figs 14-26, 33, 35, 38; <u>jpg figure similar to 14-37</u>	OP18	18
Mar 15	Cancer I: General Aspects	Figs 16-3, 4, 6, 19, 21, 22	OP19	19
Mar 17	Cancer II: Oncogenes, proto- oncogenes & tumor suppressor genes	Figs 16-9, 10, 11, 12, 14, 16, 17; also Fig 2-52	OP20	20
Mar 17	Tutorial 5-7PM: Q&A session			
Mar 22	Cancer III/ Signal Transduction I: General aspects	Figs 15-1, 2	OP21	21
Mar24	Signal Transduction II: G proteins, glucose metabolism and lipid signaling	Figs 15-3, 5, 6, 7, 9, 10, 12, 13, 14	OP22	22

Mar 29	Signal Transduction III: Calcium signaling, receptor tyrosine kinases and modulation of G-protein activity	Figs 15-17, 19, 21, 24, 25, 26, 28, 29, 32	OP23	23
Mar 31	Signal Transduction IV: Signaling pathway interactions and apoptosis	Figs 15-22, 33, 34, 35, 39, 40	OP24	24